

Quick Silver

Work Order ID 51851



Tuesday, September 08, 2009 8:40:12 AM

Item ID:	D206-667-201QS	Accept		Setup	Start	
Revision ID:						
Item Name:	Crosstube Aft -QUICK SILVER				Stop	
Start Date:	9/4/2009	Start Qty:	1.00			
Required Date:	9/11/2009	Req'd Qty:	1.00			
Reference:						

Approvals:	Process Plan:	<i>W</i>	Date:	Tooling:	Date:	Run	Start	
	QC:		Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D206-667-241	Rev C								
DSI 9471	Rev A								

210		0.00	
	SprayPaint		<i>MT 09 09 09</i>
SprayPaint	Memo	0.00	
Spray Painting	PULL FROM STOCK: 1 X D206-667-201 B <i>41539</i> <i>CHG003</i>		
	SCUFF TUBE LIGHTLY TO RE-PAINT IMRON QUICK SILVER B <i>112614</i> PER QSI005		
	APPLY IMRON CLEAR B <i>112632</i>		
220	QC14- Inspect Spray Paint	0.00	
			<i>RT 09.09.10</i>
QC	Memo	0.00	
Quality Control			

DART Dart Aerospace Ltd. 1270 ABERDEEN ST HAWKESBURY ON, CANADA K6A 1K7		TC APPROVAL # 09-89 TEL: 1-613-632-5200	
P I	D206-667-201	CHG	CHG003
DESC	Crosstube Aft High	STC	SH01-5
LOT	B41539	STC	SR01304NY
MODEL	Bell 206A/B	STC	
MADE IN CANADA		D2729-1	

Work Order ID 51851

Tuesday, September 08, 2009 8:40:12 AM



Page 2

Item ID: D206-667-201QS

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Aft -QUICK SILVER

Start Date: 9/4/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 9/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

ENSURE ORIGINAL KIT IS PACKAGED WITH TUBE

9/9/14 ① 28

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

278 07/09/14

④ 0

270

Packaging

0.00



Packaging

Memo

0.00

Packaging

RE-PACKAGE PER PPP USING NEW B/N
NEW LABELS REQ'D

8 09/09/14

CHG003

Rev C

9/9/14 ① 28

09-9-11

Work Order ID 51851

Tuesday, September 08, 2009 8:40:12 AM



Page 3

Item ID: D206-667-201QS

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Aft -QUICK SILVER

Start Date: 9/4/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 9/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/09/14 *[Signature]*
MF 09-09-14

Picklist Print

Page 1

Tuesday, September 08, 2009 8:40:12 AM

Work Order ID: 51851



Parent Item: D206-667-201QS



Parent Item Name: Crosstube Aft -QUICK SILVER

Start Date: 9/4/2009

Required Date: 9/11/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D206-667-201RevC		Manufactured	No				Each	7.0000	1.0000			

Crosstube Aft

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FG

3

16407

0

16631

0

30440

1

30441

1

30442

1

41539

1

41540

1

44141

1

44142

1

ml 09 09 09

Item	Qty -241	Part Number	Description
1	X	D206-667-241	CROSSTUBE ASSEMBLY (206B HIGH AFT)
2	1	D6003-102	CROSSTUBE
3	2	D2891-1	SUPPORT
4	4	D3595-063-395	RUBBER CUSHION
5	4	MS21920-20	CLAMP (OR MS21920-21)
6	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

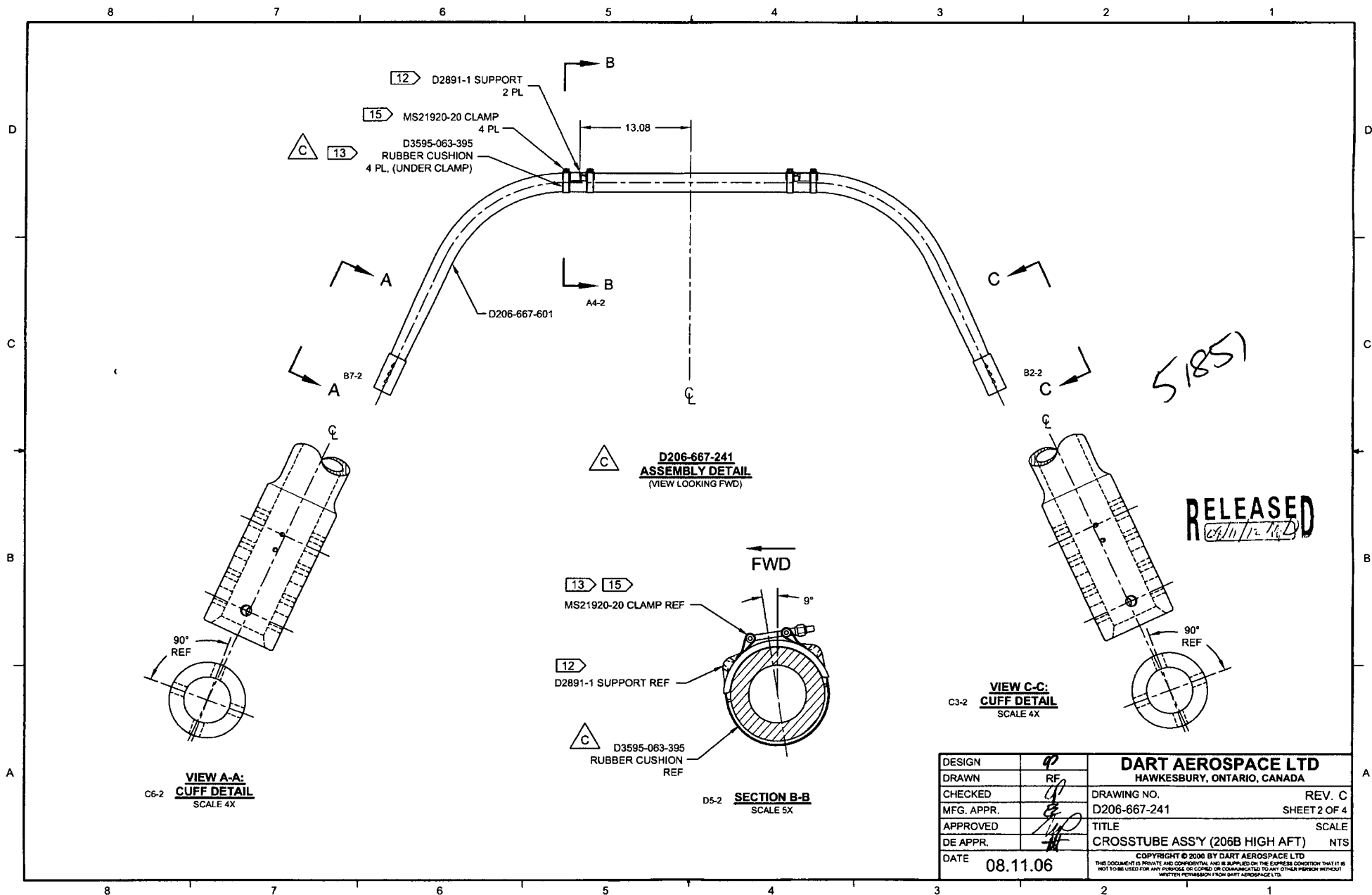
W/O
S/S

GENERAL NOTES:

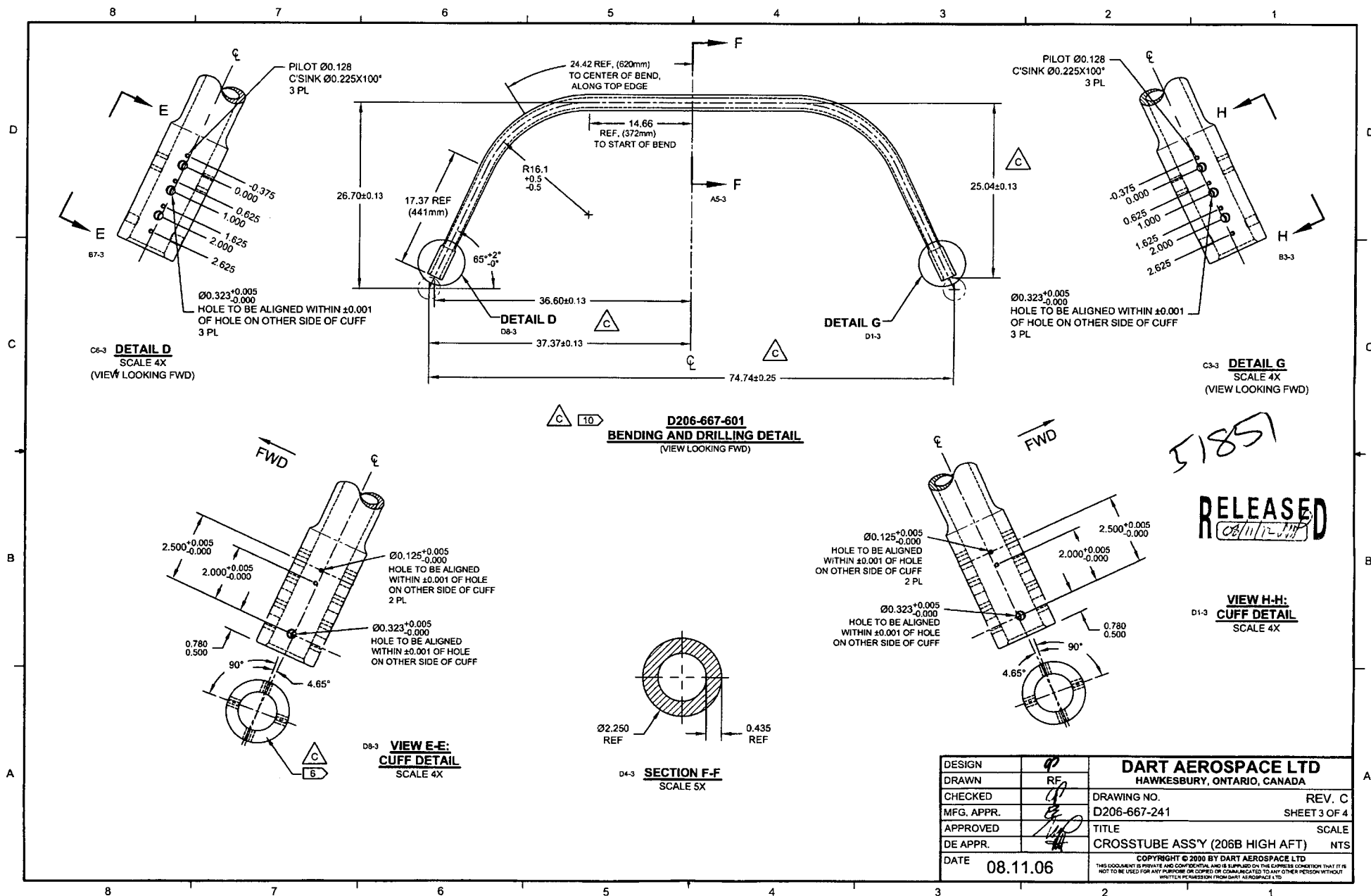
- 1) MATERIAL: MANUFACTURED FROM D6003-102
FINISHED LENGTH = 100.60±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-241" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 22.5 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 12 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS MECHANISMS ARE LOCATED ON CROSSTUBE CLAMPS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

RELEASED
08/11/12

C	REFORMAT/REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-395 WAS D2856-400-694 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCES (ZN C5-3, C4-3, D3-3); RELOCATED FLAG #6 (ZN A7-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	PH	05.02.04
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. C
CHECKED	RF	D206-667-241	SHEET 1 OF 4
MFG. APPR.	RF	TITLE	SCALE
APPROVED	RF	CROSSTUBE ASS'Y (206B HIGH AFT)	NTS
DE APPR.	RF	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DATE	08.11.06		

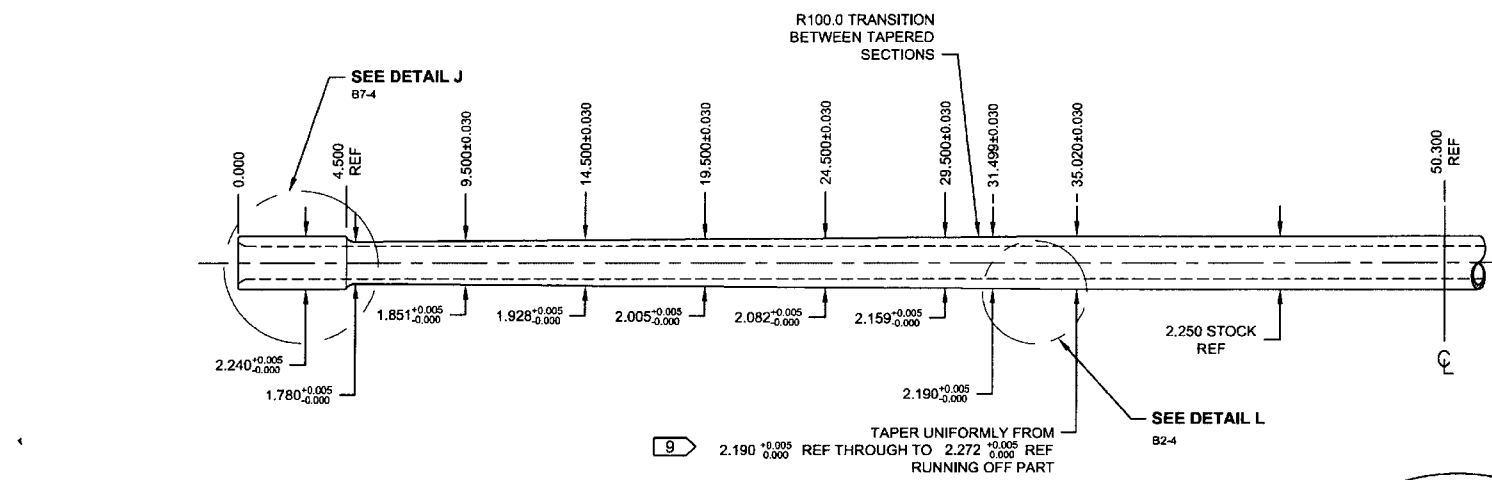


DESIGN	90	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	CP	DRAWING NO.	REV. C
MFG. APPR.	EP	D206-667-241	SHEET 2 OF 4
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	CROSSTUBE ASS'Y (206B HIGH AFT)	NTS
DATE	08.11.06	<small>COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS UNCLASSIFIED AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

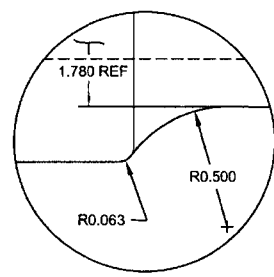


8 7 6 5 4 3 2 1

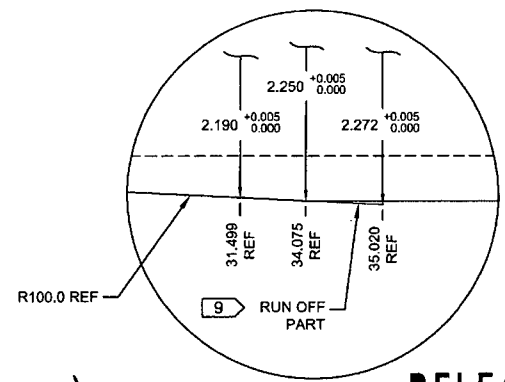
D
C
B
A



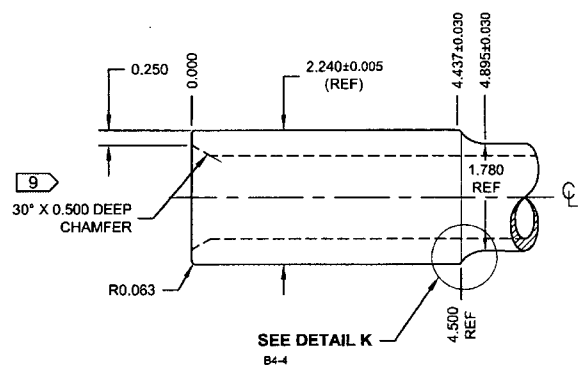
TURNING DETAIL



DETAIL K: CUFF TRANSITION
NOT TO SCALE



DETAIL L: TAPER RUN-OFF
NOT TO SCALE



DETAIL J: CROSSTUBE CUFF
NOT TO SCALE

RELEASED
2/11/12

DESIGN	9	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	CP	DRAWING NO.	REV. C
MFG. APPR.	CP	D206-667-241	SHEET 4 OF 4
APPROVED	CP	TITLE	SCALE
DE APPR.	CP	CROSSTUBE ASS'Y (206B HIGH AFT)	NTS
DATE	08.11.06	COPYRIGHT © 2000 BY DART AEROSPACE LTD	
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8 7 6 5 4 3 2 1

Work Order ID 51851

Tuesday, September 08, 2009 8:40:12 AM

Page 1

Item ID: D206-667-201QS

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Aft -QUICK SILVER

Start Date: 9/4/2009 Start Qty: 1.00

Cust Item ID:

Required Date: 9/11/2009 Req'd Qty: 1.00

Customer:

Reference:

Run Start

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D206-667-241

Rev C

DSI 9471

Rev A

210

0.00



SprayPaint

SprayPaint

Memo

0.00

Spray Painting

PULL FROM STOCK:

1 X D206-667-201 B 41539

SCUFF TUBE LIGHTLY TO RE-PAINT IMRON QUICK SILVER B 112014

PER QSI005

APPLY IMRON CLEAR B 112056

220

QC14- Inspect Spray Paint

0.00



QC

Memo

0.00

Quality Control

DART		TO APPROVAL # 09-69	
Dart Aerospace Ltd.		TEL: 1-613-632-5200	
1210 ABERDEEN ST			
HAWKESBURY, ON, CANADA K6A 1K7			
QTY	D206-667-201 QS	CHG	CHG003
GLSC	Crosstube Aft High	STG	SH01-5
LOT	B41539	STG	SR01304NY
MODEL	Bell 206A/B	STG	
MADE IN CANADA		D2729-1	

Date: Thursday, 21/08/2008 9:18:54 AM
 User: Julie Lecocq

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: 206B AFT X-TUBE
Job Number	: 41539		
Estimate Number	: 12347		
P.O. Number	:	Part Number	: D206667201
This Issue	: 21/08/2008 S.O. No. :	Drawing Number	: D206-667-241 REVB
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: 21/08/2008 Type : CROSSTUBES	Drawing Revision	: B
Previous Run	: 40550	Material	:
Written By	:	Due Date	: 09/09/2008 Qty: 1 Um: Each
Checked & Approved By	: <u>JLD 08-8-21</u>		
Comment	: Est Rev:F 05.09.01 Add holes for compatibility with Bell Skidtubes KJ/JLM Est Rev:G 08-06-03 update as per DSI9415 (ECN1198) DD verified by:EC		

Additional Product

REFERENCE ONLY

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	DC	DOCUMENT CONTROL
-----	----	------------------



JLD 08-8-28



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D206-667-201 CHG003

Sobolev

2.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1

3.0	D206667201TRN	Crosstube Turning Detail
-----	---------------	--------------------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

CROSSTUBE TURNING DETAIL

batch 1340798

DP 8-9-2

4.0	BENDING	BENDING MACHINE - SKIDTUBES
-----	---------	-----------------------------



Comment: BENDING MACHINE

Bend tube as per Dwg D206-667-241 using CNC bender program 206B-AF and Folio FT

DP 8-9-2

5.0	QC15	DIMENSIONAL CHECK OF X-TUBES
-----	------	------------------------------



Comment: DIMENSIONAL CHECK OF X-TUBES

08-09-02

Date: Thursday, 21/08/2008 9:18:54 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B AFT X-TUBE

Job Number: 41539

Part Number: D206667201

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes (3/16") as per Dwg D206-667-241 using drill Jig DT8575 & DT8576

2-Drill & ream holes as per Dwg D206-667-241 using drill Jig DT8575 & DT8576.
(DRILL 3 HOLES ON BOTH SIDES)

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate tube using "T" pins off holes drilled in previous step.

4-Drill pilot holes (3/16") as per Dwg D206-667-241 using drill Jig DT8575 & DT8576

5-Drill & ream holes as per Dwg D206-667-241 using drill Jig DT8575 & DT8576. Check dimensions between holes on all four sides to ensure proper alignment. Use DT8583 & 8584 SUPPORT Jigs.
(DRILL 3 HOLES ON BOTH SIDES)

6-Drill rivet holes as per Dwg D206-667-241 using drill Jig DT8788

7-C'sink holes as per Dwg D206-667-241

8-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-241

9-Scribe part # and batch # using vibrating stylus as per Dwg D206-667-241
Inside of Cuff (Do not engrave on outside of tube)

REFERENCE ONLY

IT
08-09-03

AWM
8-9-3

IT 08-09-03

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



AWM
8-9-3



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Date: Thursday, 21/08/2008 9:18:54 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B AFT X-TUBE

Job Number: 41539

Part Number: D206667201

Job Number:



Seq. #:

Machine Or Operation:

Description :

10.0

OUTSIDE SERV.10

OUTSIDE SERVICES -skids



REFERENCE ONLY

Comment: Sub-Contracting OUTSIDE SERVICES
Liquid Penetrant Inspection as per QSI 038Or
Issue P/O: 7097
LPI as per ASTM 1417
Level 2 Attach copy of NDT results to work order

C/L 08/09/08 (1)

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Inspect for transit damage
Ensure copy of NDT results attached to work order.

P/L 08/09/08 (1)

12.0

QC6

DIMENSIONAL CHECK



Comment: Inspect for damage & ensure results are as per Dwg D206-667-103

ml 08 09 09 (1)

13.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Mask Threaded holes

2-Prime inside and outside crosstube as per QSI 005 4.2

3-Paint outside crosstube with White Imron as per QSI 005 4.2

45 08-09-09

14.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint
Wrap in plastic bag to protect from scratches

08-09-10 (1)

15.0

D3595075395

RUBBER CUSHION .75" x 3.95



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
RUBBER CUSHION .75" x 3.95
batch: 40220

ml 08 09 10

Date: Thursday, 21/08/2008 9:18:54 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B AFT X-TUBE

Job Number: 41539

Part Number: D206667201

Job Number:



Seq. #:	Machine Or Operation:	Description :	REFERENCE
---------	-----------------------	---------------	-----------

16.0	D28911	2.25 Support	
------	--------	--------------	--



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2891-1

Support

55580

ml 08 09 10

17.0	MS2192020	Clamp (per MIL-DTL-8783C)	
------	-----------	---------------------------	--



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-20

Clamp

107501

ml 08 09 10

18.0	CROSSTUBES	CROSSTUBES RESOURCE 1	
------	------------	-----------------------	--



Comment: LANDING GEAR RESOURCE 1

A/R Magnabond 6398

batch: 108966 exp: 10/2009
time: 12:30pm

ml 08 09 10 ①

1-Install supports and clamps as per Dwg D206-667-241 and DSI9415. Torque clamps to 80-100 in lb

25 08-09-11

19.0	QC5	INSPECT WORK TO CURRENT STEP	
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Comment: INSPECT WORK TO CURRENT STEP

5 08/09/11

20.0	PACKAGING 1	PACKAGING RESOURCE #1	
------	-------------	-----------------------	--



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

21.0	AN532A	Bolt	
------	--------	------	--



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

M107013

54

22.0	D2872043	Nut Plate Assembly	
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Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2872-043

Nut Plate

1228914

8/9/11

①

54

Date: Thursday, 21/08/2008 9:18:54 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206B AFT X-TUBE

Job Number: 41539

Part Number: D206667201

REFERENCE ONLY

Job Number:



Seq. #:

Machine Or Operation:

Description :

23.0

D2872045

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number

Description Batch

2 D2872-045

Nut Plate

132899

SP

24.0

AN510A

Bolt

S



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick: Packing Kit

Qty Part number

Description Batch

10 AN5-10A

Bolt

~~M108473~~ M108471

M108827

SP

25.0

AN530A

BOLT

S



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick: Packing Kit

Qty Part number

Description Batch

10 AN5-30A

Bolt

M105144

SP

26.0

AN960JD516

Washer

S



Comment: Qty.: 20.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick: Packing Kit

Qty Part number

Description Batch

20 AN960JD516

Washer

M108672

SP

27.0

MS21042L5

Nut

S



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick: Packing Kit

Qty Part number

Description Batch

10 MS21042L5

NUT

M108161

8/9/11

SP

28.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



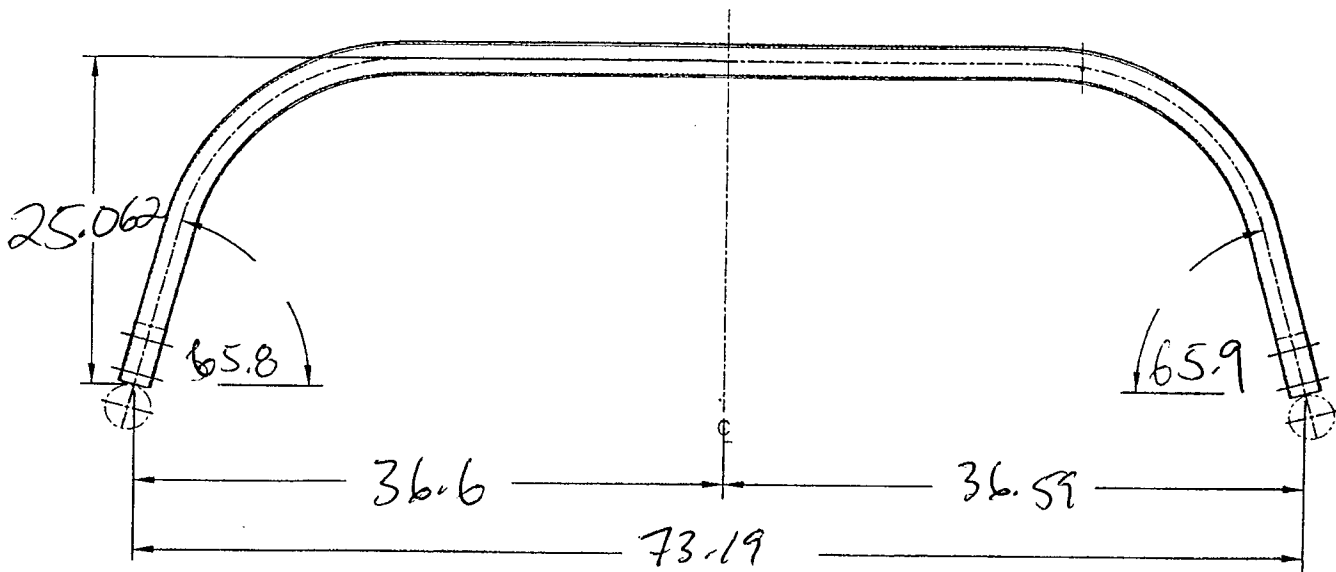
Comment: INSPECT 100% KITS FOR COMPLETENESS

8/08/09

DART AEROSPACE LTD		Work Order:	41539
Description: Crosstube High Aft (206B)		Part Number:	D206-667-201
Inspection Dwg: D206-667-241 Rev: B		Page 1 of 1	

Required Dimension	Min	Max
Height	24.98	25.10
1/2 Span	36.54	36.66
Angle	65	67
Total Span	73.08	73.32

REFERENCE ONLY



Comments

QC15 Inspection	<i>[Signature]</i>
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	<i>[Signature]</i>
B	07.12.04	24-98 was 24.48	KJ/JM	



DESIGN H	DRAWN BY H	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D206-667-241	REV. B SHEET 1 OF 3
DATE 05.02.04		TITLE CROSSTUBE ASS'Y (206B HIGH AFT)	SCALE NTS
A	00.11.17	NEW ISSUE	
B	05.02.04	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	

RELEASE
01/02/04

REFERENCE ON

Qty	Part Number	Description
X	D206-667-241	CROSSTUBE ASSEMBLY (206B HIGH AFT)
1	D6003-102	CROSSTUBE
2	D2856-400-694	ABRASION STRIP
2	D2891-1	SUPPORT
4	MS21920-20	CLAMP

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) MATERIAL: MANUFACTURED FROM D6003-102
FINISHED LENGTH = 100.60±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 12 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-694 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2891-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) IT IS OPTIONAL TO SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX 241/291 SEALANT.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

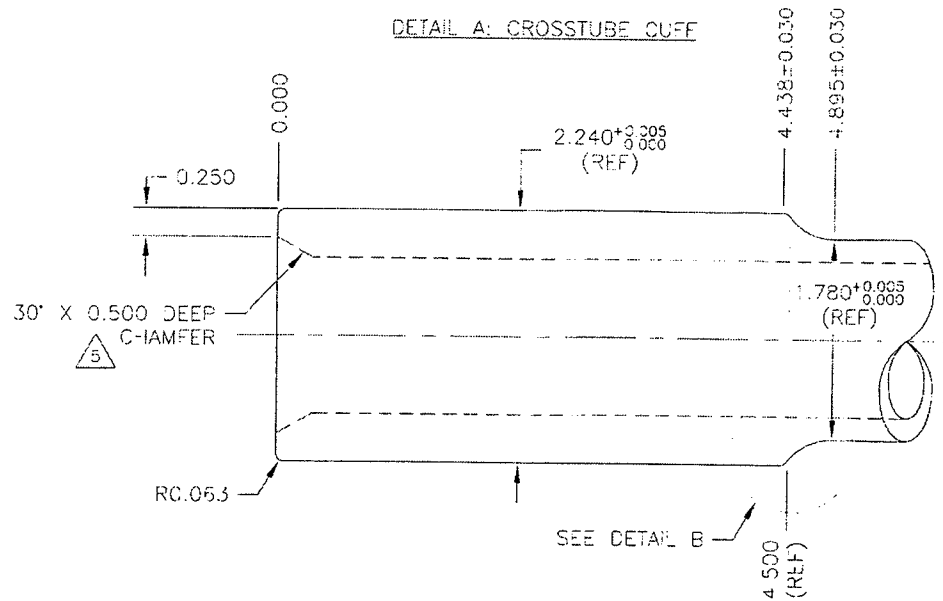
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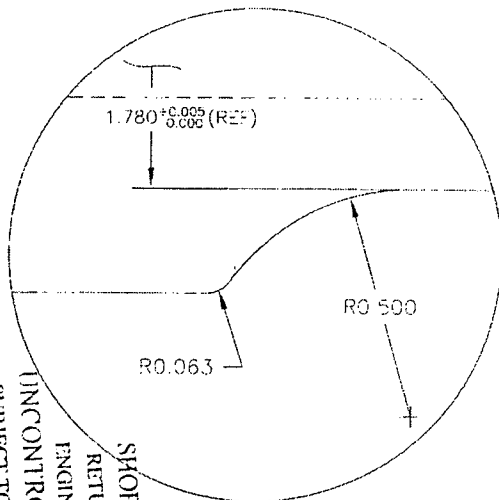
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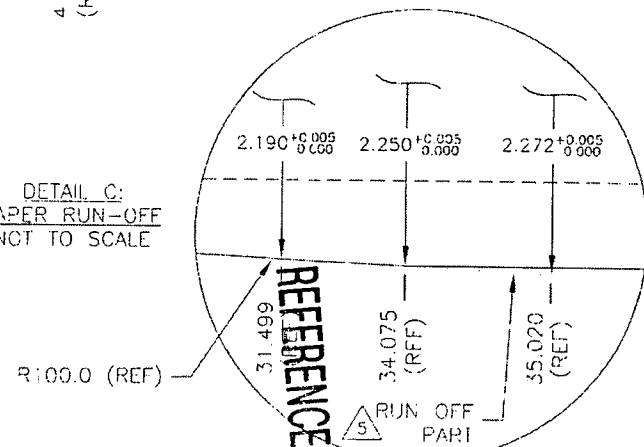
DETAIL A: CROSSTUBE CUFF



DETAIL B: CUFF TRANSITION SCALE 4:1



DETAIL C: TAPER RUN-OFF NOT TO SCALE



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DESIGN	FM	DRAWN BY	FM	DART	DART AEROSPACE LTD.
CHECKED	FM	APPROVED	FM	DRAWING NO.	0206-667-241
DATE	05.02.04	TITLE	CROSSTUBE ASS'Y (206B HGH AFT)	REV B	SHEET 1 OF 3
				SCALE	...

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LIQUID PENETRANT TEST REPORT

P - 1464 1

CLIENT	DART AEROSPACE	DATE	SEP 5, 2008	PAGE	1	OF	1
ATTENTION	LINDA LACELLE	ACUREN JOB NO.	188 08 1464	TIME	AM <input type="checkbox"/>	PM <input type="checkbox"/>	
ADDRESS	1270 ABERDEEN ST	PO/NO NO.	7097				
	HAWKESBURY, ONT.	WORK LOCATION	HAWKESBURY, ONT.				
		ACCEPTANCE STD.	ASTM 1417/QSI-038	REV./DATE	2005		
PROJECT	206L FWD X TUBE, (206B AFT X TUBE, 212/205 HIGH FED X TUBES, 407 FWD X TUBE						
ITEM(S) EXAMINED	JOB #'S: 41395, 41396, 41403, 41404, 41539, 41540, 40786, 40787, 41405, 41406						

JOB DESCRIPTION	PROCEDURE No. LT-0002	REV./DATE	TECHNIQUE No. LT-TECH2	REV./DATE
PART No. D206667103/D206667202/D212664101/D407667105	MATERIAL	ALODINED ALUM.	THICKNESS	
SCOPE	WET FLOURESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE			

TEST DETAILS

METHOD	<input checked="" type="checkbox"/> FLUORESCENT	<input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH	<input type="checkbox"/> SOLVENT REMOVABLE	<input type="checkbox"/> POST EMULSIFIED
FAMILY BRAND	MAGNAFLUX		BLACK LGHT8171	<input type="checkbox"/> OUTPUT > 1000 μ W/cm ²	<input type="checkbox"/> AMBIENT < 2 fc
PENETRANTZL67	MINIMUM DWELL TIME	45 MIN.	LIGHTING EQUIP.	<input type="checkbox"/> FLASHLIGHT	<input type="checkbox"/> TROUBLELIGHT
PENETRANT REMOVER H2O	MINIMUM DRY TIME	>10 MIN.	OTHER	CAL JUNE 16 08 REFERENCE	
DEVELOPER SKDS2	MINIMUM DWELL TIME	10 MIN.	LIGHT METER S/N	CAL DUE DATE	
DEVELOPER TYPE	<input checked="" type="checkbox"/> NON AQUEOUS	<input type="checkbox"/> AQUEOUS	<input type="checkbox"/> DRY		

TEST SURFACE

SURFACE CONDITION	<input type="checkbox"/> AS GROUND	<input type="checkbox"/> AS WELDED	<input type="checkbox"/> MACHINED	<input type="checkbox"/> SHOT BLASTED	<input checked="" type="checkbox"/> CLEAN BARE METAL
SURFACE TEMPERATURE	<input type="checkbox"/> < -4°C/ 20°F	<input type="checkbox"/> -4°C/ 20°F TO 10°C/50°F	<input type="checkbox"/> 10°C/50°F TO 52°C/125°F	<input type="checkbox"/> > 52°C/125°F	

RESULTS- (☐ METRIC ☒ IMPERIAL)

FLUORESCENT LIQUID PENETRANT INSPECTION
CARRIED OUT ON 100% EXTERNAL
SURFACE ON:

(206B) AFT X TUBE JOB#S: 41539, 41540.
212/205 HIGH FED X TUBES JOB#: 40786, 40787.
407 FWD X TUBES JOB#S: 41405, 41406.
206L FWD X TUBE JOB#S: 41395, 41396, 41403, 41404.

ml 08 09 09

RESULTS: NO INDICATION OF DEFECTS.
ITEMS ACCEPTABLE TO STANDARD

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner operator and the owner operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE		DTR # E 19943		
TECHNICIAN (SIGNATURE):		REPORT REVIEWED BY:		
NAME (PRINT):	JASON HEWETT	NAME INITIALS		
	1 ST TECHNICIAN	2 ND TECHNICIAN		
CGSB LEVEL	2	SNT LEVEL	CGSB LEVEL	SNT LEVEL
CGSB REG. No	6156	CGSB REG. No		

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